WHAT IS CLAIMED IS:

1. An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment; and

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater to thereby control temperature of the air to be supplied to the passenger compartment, wherein:

the air-conditioner is operated selectively under a cooling mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator, a heating mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater, or an air-mixing mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling positions of an air-mixing door; and

the positions of the air-mixing door are controlled to gradually increase an amount of the cooled air to be supplied to the passenger compartment when the operating mode of the air-conditioner is switched to the cooling mode from one of the other modes.

2. The automotive air-conditioner as in claim 1, wherein:

when the operating mode of the air-conditioner is switched to the cooling mode, the position of the air-mixing door is controlled to gradually increase the amount of the cooled air until an absolute value of a difference between a target temperature and an actual temperature of the air cooled by the evaporator becomes smaller than a predetermined value.

3. An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment; and

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater to thereby control temperature of the air to be supplied to the passenger compartment, wherein:

the air-conditioner is operated selectively under a cooling mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator, a heating mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater, or an air-mixing mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling positions of an air-mixing door; and

the positions of the air-mixing door are controlled to gradually increase an amount of the heated air to be supplied to the passenger compartment when the operating mode of the air-conditioner is switched to the heating mode from one of the other modes.

4. The automotive air-conditioner as in claim 3, wherein:

when the operating mode of the air-conditioner is switched to the heating mode, the position of the air-mixing door is controlled to gradually increase the amount of the heated air until an absolute value of a difference between a target temperature and an actual temperature of the air heated by the heater becomes smaller than a predetermined value.

5. The automotive air-conditioner as in claim 4, wherein:

the target temperature of the air heated by the heater is represented by a target temperature of hot water circulating the heater, and the actual temperature of the air heated by the heater is represented by a temperature of the hot water actually detected.

6. The automotive air-conditioner as in claim 1, wherein:

the evaporator is a heat exchanger disposed at a low pressure side of a vapor-compression-type refrigeration circuit that includes a compressor driven by an electric motor; and

the heater is a heating device through which hot water heated by an electric heater circulates.

7. The automotive air-conditioner as in claim 3, wherein:

the evaporator is a heat exchanger disposed at a low pressure side of a vapor-compression-type refrigeration circuit that includes a compressor driven by an electric motor; and

the heater is a heating device through which hot water heated by an electric heater circulates.